PATENT COOPERATION TREATY

PCT

Translation INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P803525/WO/1 FOR FI			FOR FURTHER A	ACTION	See Form PCT/IPEA/416		
International application No.				International filing d	ate (day/month/year)	Priority date (day/month/year)	
PCT/EP2004/007066			066	30.06.200)4	08.07.2003	
International Patent Classification (IPC) or national classification and IPC F16H61/14, F16H61/00							
Applica	nt		•				
DAIMLERCHRYSLER AG							
1.	 This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 						
2.	This RI	EPORT consists	s of a total of	6	sheets, includi	ng this cover sheet.	
3.	This rep	port is also acco	ompanied by A	NNEXES, comprising	:		
	a. 🛚	sent to the	applicant and	to the International Bi	ureau) a total of 7	sheets, as follows:	
		sheet:	s of the descrip	otion, claims and/or dra	awings which have been	amended and are the basis for this report and/or ule 70.16 and Section 607 of the Administrative	
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.						
	ь. Г	1	International	Duragu anim) a total of	Cindicate type and numb	er of electronic carrier(s))	
	D	(seni io ine	iniernaionai	Bureau oniy) a totai oi	(indicate type and numb	er of electronic carrier(s))	
		1 . 141	•	111 6		, containing a sequence listing and/or tables	
	related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).						
4.	This rep	port contains in	dications relati	ng to the following ite	ms:		
	\boxtimes	Box No. I	Basis of the	report			
		Box No. II	Priority				
		Box No. III	Non-establi	shment of opinion witl	n regard to novelty, inventive step and industrial applicability		
		Box No. IV	Lack of uni	ty of invention			
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					elty, inventive step or industrial applicability;	
	\boxtimes	Box No. VI	Certain doc	uments cited			
		Box No. VII	Certain defe	ects in the international	l application		
	Box No. VIII Certain observations on the international application						
Date of submission of the demand					Date of completion of t	his report	
Name and mailing address of the IPEA/EP					Authorized officer		
Faccinila No.					Telephone No.		

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/007066

Box	No. I	Basis of the report					
1.		regard to the language, this report is based on the internation ated under this item.	nal application in the language in	which it was filed, unless otherwise			
	This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:						
	l r	international search (Rule 12.3 and 23.1(b))					
	Ļ	publication of the international application (Rule 12.4)					
	L	international preliminary examination (Rule 55.2 and/	·				
2.	receiv	Fith regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the ceiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to is report): the international application as originally filed/furnished					
		the description:		•			
		pages 1, 4-7, 9-13 pages* 2, 2a, 3, 3a, 8	received by this Authority on	as originally filed/furnished 13.04.2005 with letter of 18.03.2005			
		pages*	received by this Authority on				
	\boxtimes	the claims:	•				
				as originally filed/furnished			
		nos.					
		nos.*		with any statement) under Article 19 13.04.2005 with letter			
		nos.* 1-5	received by this Authority on	of 18.03.2005			
	5 2	nos.*	received by this Authority on				
	M	the drawings:					
		sheets 1/1		as originally filed/furnished			
		sheets*	received by this Authority on	· · · · · · · · · · · · · · · · · · ·			
		sheets*	received by this Authority on				
		a sequence listing and/or any related table(s) - see Supplement	ental Box Relating to Sequence Li	isting.			
3.		The amendments have resulted in the cancellation of:					
	[the description, pages					
	Ī	the claims, nos.					
	Ĭ			 			
	Ì	the drawings, sheets/figs					
	Ĭ	the sequence listing (specify): any table(s) related to sequence listing (specify):					
4		This report has been established as if (some of) the amend	ments appeared to this report and	listed below had not been made since			
₩.		this report has been established as it (some of) the aliend they have been considered to go beyond the disclosure as fil					
	Ĺ	the description, pages					
	l	the claims, nos.					
	إ	the drawings, sheets/figs					
	[the sequence listing (specify):					
	[any table(s) related to sequence listing (specify):					
*	lf iten	n 4 applies, some or all of those sheets may be marked "supe	erseded."				

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
1.	Statement				
	Novelty (N)	Claims 1-5 YES Claims NO			
	Inventive step (IS)	Claims 2-5 YES Claims NO			
	Industrial applicability (IA)	Claims 1-5 YES Claims NO			
2.	Citations and explanations (Rule	70.7)			
	1 This repo	rt makes reference to the following			
	documents				
	D1: US 4	526 557 A (ABO KEIJU ET AL) 2 July 1985			
	(198	5-07-02)			
	D2: US 5	842 949 A (KURIYAMA MINORU)			
	1 De	cember 1998 (1998-12-01)			
	D3: KUECU	EKAY F ET AL: "GEREGELTE WANDLERKUPPLUNG			
	FUER	DEN NEUEN 7ER VON BMW" ATZ			
	AUTC	MOBILTECHNISCHE ZEITSCHRIFT,			
	FRAN	CKH'SCHE VERLAGSHANDLUNG. STUTTGART, DE,			
	vol.	96, no. 11, 1 November 1994 (1994-11-			
	01), 2785	pages 690-697, XP000478695 ISSN: 0001-			
		1 074423 (SIEMENS AG) 7 February 2001			
	,				
	2. D2, which	is considered to represent the prior art			
	closest t	o the subject matter of claim 1,			
	discloses	(the references in parentheses are to			
	this docu	ment):			
	a nr	ocess for operating a drive train of a			

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vehicle with a drive motor, a powershift automatic transmission, an externally actuated lockup clutch (10A) arranged between the drive motor and the automatic transmission and at least one control device (70), by means of which the automatic transmission and the clutch (10A) can be controlled, wherein, on detecting a requirement to downshift the automatic transmission, the control device increases slip on the clutch ("lockup release", see column 1, line 59 to column 2, line 5).

The subject matter of claim 1 thus differs from the process known from D2 in that

the control device sets a defined slip such that by increasing slip on the clutch a speed of the drive motor is constantly guided upwards towards a target speed after the downshift has been locked.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention may therefore be considered that of achieving a response to the requirement to downshift that is both spontaneous and smooth.

The solution to this problem proposed in claim 1 of the present application involves an inventive

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step (PCT Article 33(3)). The reasons are:

Although D2, figure 8, shows a constantly increasing speed of the drive motor after a requirement to downshift, this increase is achieved by time-controlled release of the torque converter clutch without selective setting of a defined slip.

In D3, which likewise discloses all the features of the preamble (see page 693, paragraph 2.6, penultimate function), torque converter slip is selectively increased to a predefined higher value. However, D3 neither discloses nor suggests constantly guiding the speed of the drive motor upwards towards a target speed after locking the downshift.

3. Claims 2-5 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

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Box	No. VI	Certain documents cited				
1.	Certain published documents (Rule 70.10)					
		Application No. Patent No.	Publication date	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)	
		Patent No.	(day/month/year)	(day/monin/year)	(day monthy year)	
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2.	Non-wri	itten disclosures (Rule 70.9)		Date	of written disclosure	
		Kind of non-written disclosure	Date of non-written discl (day/month/year)	osure referring t	o non-written disclosure day/month/year)	
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